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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,072	02/05/2001	Ilkka Rata	11001.070	2484

7590

03/26/2004

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EXAMINER

BRYANT, DAVID P

ART UNIT	PAPER NUMBER
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3726

DATE MAILED: 03/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/777,072

Applicant(s)

RATA, ILKKA

Examiner

David P. Bryant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Phelps (U.S. Patent No. 4,669,164).

Phelps teaches a method for manufacturing a blade 11, in which an essentially plate-like blade component is formed, and retention members 16 are arranged in the rear part of the blade component to retain the blade in the throat 14 of a special blade holder 1, characterized in that a unified blank 12 is formed in which both the blade components and profilings forming the retention members for two or more blades are manufactured simultaneously by extrusion (Figure 3 and column 1, lines 58-62), and from which unified blank the said two or more blades with their retention members are detached (using saw 18 in Figure 3, as disclosed in column 2, lines 11-15).

Phelps fails to teach the claimed material for the blank/blade, i.e. a composite material. Rather, Phelps discloses that aluminum and plastic materials are particularly adaptable to the blade construction (column 1, lines 67-68).

However, it would have been obvious to one of ordinary skill in the art to form the fan blade of Phelps from a composite material, since it has been held that the selection of a known

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material on the basis of its suitability for the intended use is a matter of obvious design choice.

In re Leshin, 125 USPQ 416. It is well known that composite material is readily extrudable, which makes it a suitable material choice for the fan blade of Phelps.

Further, it is noted that the particular material chosen for the fan blade does not affect the method steps in any manipulative way (i.e. the method would be identical for any extrudable material). It has been held that to be entitled to weight in method claims, any recited structural limitations therein must affect the method in a manipulative sense, and must not amount to the mere claiming of a use of a particular structure. *Ex parte Pfeiffer*, 1962 C.D. 408 (1961). In this case, the recitation of the particular material of the fan blade amounts to a structural limitation, making the *Pfeiffer* decision pertinent to the claimed invention.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopfe et al. (U.S. Patent No. 4,241,691) in view of Rata (WO 99/64674) and Phelps (U.S. Patent No. 4,669,164).

Claim 7: In Figure 3, Hopfe et al. depict an essentially plate-like blade component **3** formed from composite material (column 2, lines 33-43), the blade component including integrally formed profiling at one end thereof in the form of a rounded retention member **12**, the retention member being sized to fit within a corresponding recess **15** on a blade holder **1**.

Hopfe et al. fail to teach the claimed method steps for manufacturing the composite blade (i.e. applicant's recitation of "both blade components and profilings forming the retention members for two or more blades are manufactured simultaneously, and from which unified blank the blades with their retention members are detached").

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Rata teaches a method for manufacturing a composite doctor blade by pultrusion. See the Abstract and Page 3, lines 18-22.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have manufactured the composite doctor blade of Hopfe et al. by pultrusion (thus forming the blade component and the profiling/retention members simultaneously), in view of the disclosure in Rata (on Page 3, line 22) that the “pultrusion method is the most preferable method for its good production rate.”

Although Rata infers (at least from the disclosure that pultrusion has a “good production rate”) that the pultrusion process would result in an elongated blank which would then be trimmed to size to form a plurality of doctor blades (as is well known in conventional pultrusion and extrusion processes), it is not explicitly clear that “the blades with their retention members are detached” from a blank, as recited by applicant in claim 7.

In Figures 1 and 2, Phelps depicts blades 11 being inserted within an impeller hub 1. The blades are provided with integrally formed profiling 16 which is accommodated within corresponding openings 14 in the impeller hub. As shown in Figure 3, an elongated blade blank 12 is formed by extrusion, and individual blades are then detached from the blank using cutting tool 18 (see column 1, lines 58-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed an elongated doctor blade blank using the pultrusion method of Rata, and to subsequently detach individual doctor blades therefrom, as taught by Phelps, to efficiently manufacture the doctor blades of Hopfe et al.

Claim 8: As set forth above, Rata teaches pultrusion.

Allowable Subject Matter

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Reasons for indicating allowable subject matter were included in the last Office action. However, the examiner's locating of WO 99/64674 (of which the present applicant Rata is listed as the first named applicant) used in this Office action brings into question whether applicant has completely fulfilled the duty to disclose obligation, as required by 37 CFR 1.56 and discussed in MPEP Chapter 2000. *As such, in response to this Office action, applicant is requested to explicitly inform the examiner whether or not applicant is aware of a composite doctor blade which includes both retention profiling and holes formed in the profiling.*

Response to Arguments

Applicant's arguments filed December 16, 2003, have been fully considered but they are not persuasive. Applicant's arguments are set forth below in italics, followed by the examiner's response.

Hopfe does not give any hint as to how to manufacture the blade shown in Figure 3. The examiner agrees. Hopfe has been cited to show that a composite doctor blade having the structure claimed is known in the art. The examiner chose to use an explicit prior art teaching of this structure, rather than rely on the preamble as prior art.

Kirjava should not be used as prior art because its publication date is subsequent to applicant's priority date. The examiner agrees. Rata (WO 99/64674) has been substituted for Kirjava.

Phelps only teaches how to trim lengthwise pieces from an elongated piece. There is no teaching or suggestion for manufacturing two or more blades simultaneously in a unified blank.

The examiner disagrees. Phelps explicitly discloses that a length of blade stock is formed by extrusion, and that individual blades may be cut from the blade stock. The blade stock correlates directly to applicant's claimed "unified blank." Clearly, a plurality of blades are manufactured simultaneously in the form of an elongated blank in the extrusion process, from which a plurality of individual blades are later detached.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 0 448 043 A1 and WO 99/04091 disclose forming composite doctor blades by pultrusion.

EP 0 454 404 A1 teaches a composite doctor blade including integral retention members formed therein.

Brooks et al. (U.S. Patent No. 5,759,680) disclose a composite material suitable for extrusion.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Telephone inquiries regarding the status of this application, or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David Bryant** whose telephone number is (703) 308-1859. Draft amendments or proposed changes to the application may be faxed directly to the examiner at any time via RightFAX at (703) 746-4213 (formal inquiries or responses should NEVER be faxed to this number). The examiner can normally be reached on **Mondays-Thursdays from 6:30 AM to 5:00 PM.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The official fax phone number for the organization where this application or proceeding is 703-872-9306 for all communications (including After Final communications).

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
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Certificates of Correction	(703) 305-8309

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David P. Bryant
Primary Examiner
Art Unit 3726